

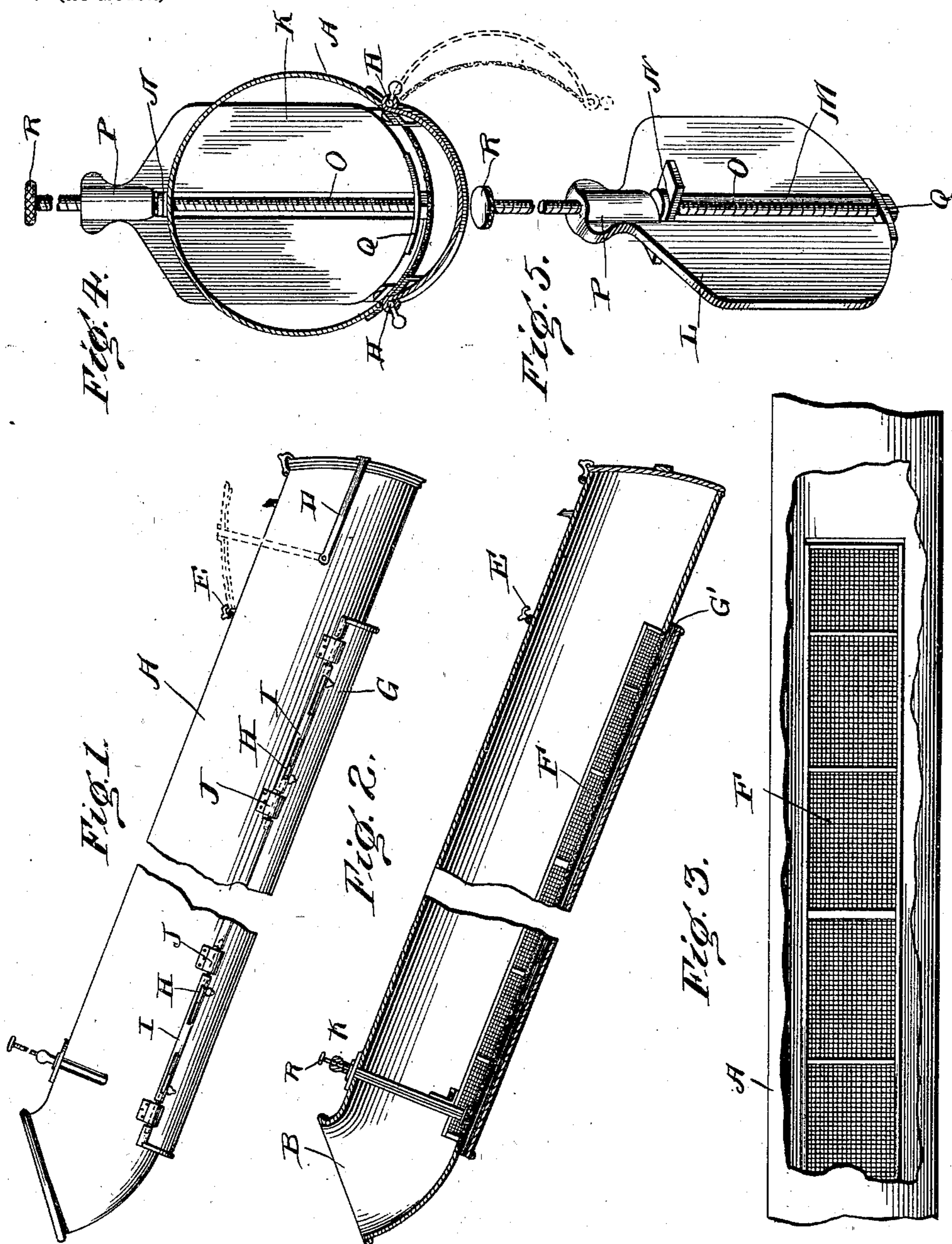
No. 702,440.

Patented June 17, 1902.

B. KIENHOLZ.  
GRAIN SPOUT.

(Application filed July 31, 1901.)

(No Model.)



Witnesses:  
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# UNITED STATES PATENT OFFICE.

BENJAMIN KIENHOLZ, OF HALLOCK, MINNESOTA.

## GRAIN-SPOUT.

SPECIFICATION forming part of Letters Patent No. 702,440, dated June 17, 1902.

Application filed July 31, 1901. Serial No. 70,391. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN KIENHOLZ, a citizen of the United States, residing at Hallock, county of Kittson, and State of Minnesota, have invented a certain new and useful Improvement in Grain-Spouts, of which the following is a specification.

My invention relates to a new and useful improvement in grain-spouts, and has for its object to provide a spout in which a screen is secured in the bottom, by which the foul or smaller undesirable grain will be sifted out while the grain is passing through the spout.

A further object of my invention is to provide a secondary spout secured beneath the screen which will receive the refuse grain and carry it to a separate receptacle.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claim.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of my grain-spout; Fig. 2, a longitudinal section of the same; Fig. 3, a plan view, a portion broken away to show the grain; Fig. 4, a cross-section of the spout, and Fig. 5 is a perspective view of the gate which controls the flow of the grain.

In the drawings, A represents the spout, which is preferably made cylindrical in form and is slightly turned at the receiving end B and is adapted to be closed at the discharge end by means of the curved plate C, which is pivoted by means of the arms D to each side of the spout. The discharge end of the spout is formed concentric with the pivotal point, so that the plate C can swing up over the spout and be secured by the latch E. When it is desired to change the bags or close the spout, by pressing back the latch E the plate C will fall by gravity over the discharge end of the spout, and thus stop the flow of the grain. The bottom of the spout is cut away to within a short distance of each end, and in the opening thus formed is secured a screen F, over

which the grain passes in falling through the spout, and the smaller or undesirable grain will fall through the meshes of the screen, while the marketable grain will fall onward and be discharged from the discharge end of the spout into the receiving-receptacle arranged below the spout, and underneath the screen is a secondary spout or trough G, which is secured to the spout A upon each edge by means of the bolts H, which slide in the guides I, formed with the trough, and the noses of the bolts are adapted to be shot within the keepers J to hold the trough G to the spout A. Thus it will be seen that the refuse grain in falling through the mesh of the screen will fall into the trough and flow downward and out of the end G' into a suitable receiving-receptacle.

K is a gate-valve arranged in the spout near the receiving end. This gate-valve is composed of the plate L, which is adapted to slide through a slot formed in the upper part of the spout, and this plate L has a slot M formed through the center of the same, through which a block N protrudes, and this block is secured to the upper side of the block A. A screw-threaded rod O passes downward through the neck P of the plate and into the slot M and is threaded through the block N, and the lower end of this screw-threaded rod is swiveled within a plate Q, secured to the lower end of the valve. A head R is secured to the upper end of the screw-threaded rod for the purpose of turning the same. Thus it will be seen that the valve may be raised or lowered by turning the screw-threaded rod within the block N. This valve is for the purpose of retarding the grain in its flow through the spout.

It will be observed in the drawings that the screen F is shown as composed of sections. The purpose of this is that if any one of the sections becomes damaged it may be removed and a new screen inserted, or the space formerly occupied by that section can be bridged over by boards, and thus the spout can be used with the rest of the screen without interfering with the work and without removing the entire screen.

The advantage of my invention is that in using this spout with threshing-machines the small or undesirable grain will be separated

from the whole grain while the grain is passing from the weighing-scales to the bag. Thus without any extra cost the farmer will save paying freight upon the foul or undesirable seed, and he will thus save the dockage at the market and also save the small seed, which can be used by him in feeding cattle or hogs, &c.

Of course I do not wish to be limited to the exact construction here shown, as slight modifications could be made without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful is—

In a grain-spout having an opening formed through the lower side thereof, a wire-mesh screen adapted to be secured within said opening, a trough-shaped secondary spout arranged below said screen, guideways secured to each edge of the secondary spout, bolts adapted to

slide within said guideways, keepers secured to the spout proper, into which the noses of the bolts are adapted to be shot to secure the secondary spout to the spout proper, a gate-valve arranged within the spout near the receiving end, means for raising and lowering said valve, a pivoted cover pivoted to the side of the spout and adapted to open or close the discharge end of the same, latches adapted to secure said cover in either its raised or lowered position, substantially as and for the purpose set forth.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

BENJAMIN KIENHOLZ.

Witnesses:

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